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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,274	05/08/2001	Hiroshi Kubota	5576-125	3436

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EXAMINER

LEE, SIN J

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 04/16/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

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Advisory Action	Application No. 09/851,274	Applicant(s) KUBOTA ET AL.	
	Examiner Sin J. Lee	Art Unit 1752	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 3/24/03 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-4 and 9-20.

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____

Continuation of 5. does NOT place the application in condition for allowance because: Applicants arguments have been fully considered however they are unconvincing. In regard to instant claims 1-4, 9-10 and 17-19, applicants argue that the prior art fails to teach or suggest the specific combination of fluorine containing surfactant and non-ionic surfactant as set forth in the said claims. Applicants also argue that the prior art fails to recognize the result-effective capability of the non-ionic surfactant. The examiner respectfully disagrees. Kawabe clearly teaches that a nonionic surfactant can be further added to the taught photosensitive resin composition which comprises (A) a compound which generates an acid upon irradiation; (B) a polymer represented by formula (Ia-Ic); (C) a nitrogen containing basic compound; and (D) at least one of a fluorine type surfactant and a silicone type surfactant (abstract). Thereby meeting the claim limitations of a combination of fluorine containing surfactant and a non-ionic surfactant. Kawabe teaches that the nonionic surfactant is added for the purpose of improving the applicability or developability of the taught resin composition (c. 44, l. 64-67). Therefore, one of ordinary skill in the art would have been motivated to optimize the amount of nonionic surfactant in order to obtain optimal results. Applicants clearly admit on the record that the amount of nonionic surfactant is a result effective variable. Discovering an optimum value of a result effective variable involves only routine skill in the art and does not render the claimed invention patentably distinct. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, there is no evidence that optimizing the amount of nonionic surfactant in the prior art does not render obvious the claimed invention.


As decided in *In re O'Farrell*, 7 USPQ 2d, 1673-1681, Fed. Cir. 1988, obviousness does not require absolute predictability of success. Indeed, for many inventions that seem quite obvious, there is no absolute predictability of success until the invention is reduced to practice. There is always at least a possibility of unexpected results that would then provide an objective basis for showing that the invention, although apparently obvious, was in law nonobvious. In *re Merck & Co.*, 800 F.2d at 1098, 231 USPQ at 380; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1461, 221 USPQ 481, 488 (Fed. Cir. 1984); *In re Papesch*, 315 F.2d 381, 386-387, 137 USPQ 43, 47-48 (CCPA 1963). For obviousness under 35 U.S.C. 103, all that is required is a reasonable expectation of success. In *re Longi*, 759 F.2d 887, 897, 225 USPQ 645, 651-652 (Fed. Cir. 1985); *In re Clinton*, 527 F.2d 1226, 1228, 188 USPQ 365, 367 (CCPA 1976). Kawabe clearly teaches that the nonionic surfactant is added for the purpose of improving the applicability or developability of the taught resin composition (c. 44, l. 64-67). Therefore, one of ordinary skill in the art would have a reasonable expectation of success in incorporating an optimal amount of nonionic surfactant into the taught composition of Kawabe comprising a fluorine containing surfactant in order to optimize the applicability and developability of the taught composition.

In regard to instant claims 13-16, applicants argue that the prior art fails to teach and/or suggest a substrate being exposed through a photomask to radiation selected from the group consisting of high energy radiation having a wavelength of 500 nm or less, X-ray radiation, and electron beam radiation as recited in instant claim 13. The examiner respectfully disagrees. Kawabe clearly teaches that the taught resin composition is exposed to an exposure light having a wavelength of 220 nm or shorter through a given mask (c. 45, l. 51-58). The taught examples exemplify the resist film being exposed to ArF excimer laser (193 nm) light through a mask (c. 50, l. 33-39). It is the examiner's position that an exposure light having a wavelength of 220 nm or less such as ArF excimer laser meets the limitation of a high energy radiation having a wavelength of less than 500 nm.

In regard to instant claims 11, 12 and 20, applicants argue that Kawabe fails to teach and/or suggest the weight ratio of the non-ionic surfactant to the fluorine surfactant; fails to recognize the result-effective capability of the invention; and fails to provide a reasonable expectation of success of arriving at the present invention. As discussed above, Kawabe teaches that the nonionic surfactant is added for the purpose of improving the applicability or developability of the taught resin composition (c. 44, l. 64-67). Therefore, one of ordinary skill in the art would have been motivated to optimize the amount of nonionic surfactant in order to obtain optimal results. Applicants clearly admit on the record that the amount of nonionic surfactant is a result effective variable. Discovering an optimum value of a result effective variable involves only routine skill in the art and does not render the claimed invention patentably distinct. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, there is no evidence that optimizing the amount of nonionic surfactant in the prior art does not render obvious the claimed invention.

The examiner maintains the position of record for the reasons discussed above.

The examiner can be reached on Monday-Friday from 8:30 am EST to 5:00 EST at (703) 305-0504.


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